

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventors:Bahl, *et al.*
Applicant:Microsoft Corporation
Group Art Unit:2135
Examiner:B.W. DADA
Confirmation No.:7584
Applicant's Docket No.:147649.01
Title: Method For Controlling Access To A Network By A Wireless Client

RESPONSE TO FINAL OFFICE ACTION OF JULY 8, 2005
AMENDMENT

To: MS: AF
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

From: David S. Lee
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Sir:

In response to the Final Office Action of July 8, 2005, in connection with the above-identified application, the following amendments and remarks are submitted. Favorable consideration is respectfully requested.

THE CLAIMS

A detailed listing of the claims is provided below. A status identifier is provided for each claim in a parenthetical expression following each claim number.

1. (Currently Amended) A method for controlling access to a network by a wireless client, the method comprising:

assigning a network address to the wireless client, wherein the network address has a lease period;

sending the assigned network address to the wireless client prior to establishing a secure link;

establishing the secure link using the assigned network address; and

sending an address of a wireless access point to the wireless client, wherein the wireless access point is adapted to ~~provide access to the network for the wireless client~~
handle the secure link established by the wireless client; and

~~if the wireless client fails to establish the secure link with the wireless access point and request a renewal of the assigned address via the secure link within the lease period, invalidating the assigned network address, thereby preventing the wireless client from accessing the network.~~

2. (Original) The method of claim 1, wherein the assigned network address and the wireless access point address are sent to the wireless client in a DHCP offer packet.

3. (Original) The method of claim 1, wherein the secure link is an IPSEC tunnel.

4. (Original) The method of claim 1, wherein the assigned network address is sent to the wireless client via the wireless access point.

5. (Original) The method of claim 1, wherein the address of the wireless access point that is sent to the wireless client comprises an IP address and a MAC address.

6. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 1.

7. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 2.

8. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 3.

9. (Previously Presented) A method for controlling access to a network by a wireless client, the wireless client using an assigned network address having a lease period to communicate with the network, the method comprising:

engaging in a negotiation of a secure link with the wireless client;

communicating with an address server of the network to determine whether the lease period of the leased network address has expired; and

if the lease period is determined to be expired, terminating the negotiation, thereby preventing the wireless client from accessing the network.

10. (Original) The method of claim 9, wherein the negotiation is a negotiation of an IPSEC tunnel.

11. (Original) The method of claim 9, wherein the address server is a DHCP server.

12. (Currently Amended) A method for controlling access to a network by a wireless client, the method comprising:

- receiving a request for a network address from the wireless client;
- attaching information to the request to indicate that the request originated from a wireless client;
- relaying the request to the address server;
- receiving an assignment of an address from the address server, the address having a lease time;
- relaying the assignment of the address to the wireless client;
- negotiating the establishment of a secure link with the wireless client using the assigned address; and
- ~~if the lease time expires before the secure link is established, denying the wireless client access to the network~~ using the assigned address to communicate with clients via a wireless access point.

13. (Previously Presented) The method of claim 12, further comprising:

- broadcasting an ARP packet to check whether there are any other clients having the same assigned address of the wireless client; and
- if a response to the ARP packet is received, terminating the negotiation, thereby denying the wireless client access to the network.

14. (Previously Presented) The method of claim 12, further comprising:

- in response to the negotiation, creating an ARP entry that maps the assigned address of the wireless client to a MAC address of the wireless client.

15. (Original) The method of claim 12, wherein the request is a DHCP discover packet, the method further comprising: inserting data into an optional field of

the packet to indicate that the packet was received from a wireless client; and relaying the packet to the address server.

16. (Previously Presented) The method of claim 12, further comprising:
receiving a renewal request packet having a request for a renewal of the lease time from the wireless client;
if the secure link is successfully negotiated with the wireless client, inserting data into an optional field of the renewal request packet to indicate that the renewal request packet was received from a wireless client; and
relaying the renewal request packet to the address server.

17. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 9.

18. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 10.

19. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 12.

20. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 13.

21. (Original) On a wireless client, a method for gaining access to a network, the method comprising:
broadcasting a request for an address on the network;
receiving an assignment of a leased address from the network, the leased address having a lease time; and

negotiating a secure link with the network before the lease time expires.

22. (Original) The method of claim 21, wherein the request for an address is broadcast as a DHCP discover packet.

23. (Original) The method of claim 21, wherein the secure link is an IPSEC tunnel.

24. (Previously Presented) The method of claim 21, wherein the negotiating step further comprises:

generating an ARP packet having the lease address; and

in response to the ARP generation, initiating a negotiation of the secure link with the network.

25. (Original) The method of claim 21, wherein the leased address is received in a packet, wherein the packet additionally contains the network and MAC address of a wireless access point, wherein the secure link is negotiated with the wireless access point corresponding to the network address.

26. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 21.

27. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 22.

28. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 23.

29. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 24.

30. (Original) A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 25.

31. (Previously Presented) The method according to claim 1 wherein the assigned network address having the lease period is sent to the wireless client prior to authentication of the wireless client.

32. (Previously Presented) The method according to claim 1 wherein the lease period is of a duration that is sufficient for the wireless client to establish a secure link with the wireless access point and send a renewal request of the assigned address via the secure link.

33. (Previously Presented) The method according to claim 1 further comprising the step of extending the lease period of the assigned network address to a predefined duration if the wireless client establishes a secure link with the wireless access point and requests a renewal of the assigned address via the secure link.

REMARKS

The Applicant wishes to thank the Examiner for the courtesy and cooperation shown in scheduling and conducting a telephone interview with the Applicant's undersigned representative on November 14, 2005. However, as of the date of filing this Response to the Final Office Action of July 8, 2005, the Applicant has not yet received a copy of the Interview Summary to summarize the substance of that telephone interview.

Regardless, reconsideration and allowance of pending Claims 1-33 are respectfully requested.

The rejection of Claims 1-33 under 35 U.S.C. §103(a) as being unpatentable over Nordman (U.S. Patent 6,061,346; hereafter "Nordman") in view of Inoue, *et al.* (U.S. Patent 6,510,153; hereafter "Inoue") has been maintained. The Applicant respectfully maintains its traversal to this rejection because the rejection fails to establish a *prima facie* case of obviousness, as set forth in MPEP §2143, which states, in part:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Applying at least two of the above requirements to the rejected claims, the Applicant previously submitted that Nordman and Inoue, both singularly and in combination, fail to provide sufficient basis for establishing a *prima facie* case of obviousness. In particular, with regard to independent Claims 1, 9, 12, and 21, neither reference provides any suggestion or motivation for the proposed combination, nor do references teach or suggest all of the features of the rejected claims.

For instance, the method of **Claim 1** recites, in part:

assigning a network address to the wireless client,
wherein the network address has a lease period;
sending the assigned network address to the
wireless client prior to establishing a secure link...

The rejection asserts that these features are taught, respectively, by Nordman at col. 4, lines 13-22 and col. 7, line 53 – col. 8, line 5. The Applicant disagrees.

While Nordman, col. 4, lines 17 and 18 describes, “An IP address is allocated to the wireless host by the private IP network,” the Applicant again refers to the preceding description at col. 4, lines 4 – 17 to provide the cited description with its proper context:

When the wireless host requests access to the private IP network, communications are first authenticated at the wireless access network formed of the network infrastructure of the PLMN [public land mobile network]...The private IP network permits access to the wireless host if the wireless host identity provided thereto corresponds with the identity of a wireless host permitted to access the private IP network. (emphasis added by Applicant)

That is, Nordman does not teach “sending the assigned network address to the wireless client prior to establishing a secure link,” (emphasis added by Applicant) as recited in Claim 1. Rather, Nordman teaches that an IP address is allocated to the wireless host by the private IP network after an authentication procedure has been performed to confirm that communications are permitted by way of the wireless access network (Nordman, col. 4, lines 7-9). The description at col. 7, line 53 – col. 8, line 5 of Nordman, as cited in the rejection, further supports the Applicant’s point by stating, “because the IP address and DNS name is provided at the private IP network, the wireless host 32, when permitted access to the private IP network, becomes a virtual host of the network 14” (Nordman, col. 7, line 65 – col. 8, line 3).

Further, **Claim 1 has been amended** to recite that the wireless access point is adapted to handle the secure link established by the wireless client. That is, a dynamic address assigned to a wireless client to establish a secure link may be further utilized by the wireless client to access clients via a wireless access point. Such feature is not taught or suggested, either expressly or inherently, by either of the cited references.

The Applicant further submits that **Claims 2-8 and 31-33** are patentably distinguishable over the proposed combination of Nordman and Inoue for at least the reasons set forth above due to their dependency upon Claim 1.

Claims 9 and 17 were rejected for the same reasons as Claims 1 and 6. However, independent Claim 9 does not recite the same features as Claim 1. More particularly, the rejection does not address any of the specifically recited features of independent Claim 9. Therefore, without acquiescing to the characterization of the rejected claims, the Applicant respectfully submits that neither Nordman nor Inoue, either singularly or in combination, teaches or suggests the features of independent Claim 9 or corresponding dependent **Claims 10, 11, 17, and 18**.

Independent **Claim 12 has been amended** to recite the step of using the assigned address to communicate with clients via a wireless access point. Thus, an address assigned to a wireless client to establish a secure link may be further utilized by the wireless client to access clients via a wireless access point. Such feature is not taught or suggested, either expressly or inherently, by either of the cited references.

The Applicant submits that **Claims 13-16, 19, and 20** are patentably distinguishable over the proposed combination of Nordman and Inoue for at least the reasons set forth above due to their dependency upon amended independent Claim 12.

Claims 21 and 26 were rejected for the same reasons as Claims 12 and 19. However, independent Claim 21 does not recite the same features as independent Claim 12. More particularly, the rejection does not address any of the specific features of independent Claim 21. Therefore, without acquiescing to the characterization of the rejected claims, the Applicant respectfully submits that neither Nordman nor Inoue, either singularly or in combination, teaches or suggests the features of independent Claim 21 or corresponding dependent **Claims 22-30**.

Accordingly, for at least the reasons set forth above, it is respectfully submitted that a *prima facie* case of obviousness has not been established for any of the presently

rejected claims. Therefore the present rejection under 35 U.S.C. §103(a) should be reconsidered and withdrawn.

CONCLUSION

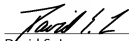
The remaining references of record have been studied. It is respectfully submitted that they do not compensate for the deficiencies of the cited references with respect to the rejected claims, even in view of the Response to Arguments submitted in the outstanding Office Action.

All objections and rejections having been addressed, it is respectfully submitted that the present application is now in condition for allowance. Early and forthright issuance of a Notice of Allowability is respectfully requested.

Respectfully Submitted,

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Dated: December 7, 2005



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